/147 cont./

9) Indolence.

• 461 To visitors used to the intense and constant rhythm of activity and work in our great cities, it will seem strange to encounter the natives, during the day, in bed in their hammocks, asleep or entertained for hours on end in pleasant conversation. The repetition of these encounters will plant in their minds the traditional conviction about the indolence of the Indians. Perhaps it would be more exact to state that the Indian is neither the hero of hardship nor the prototype of indolence, although by temperament he is slow in his movements, as he is of spirit.

The nature that surrounds him and his way of life establishes for him a rhythm of work. He performs all those jobs that the customs impose on him: he builds his house, cuts down the forest for a clearing, prepares his fishing nets, hollows out his canoe, occupies himself with fishing and hunting, manufactures his utensils. If we do not find him busy from morning to night every day, like the civilized, it is because he does not /148/ feel the necessity of it. He does not have ambitions; he is contented with little, and he works as much as necessary in order to live. It is also certain that the depth of preconceived opinion that he feels against the civilized is not stimulus for the Indian to make an effort when he works for the "white." He will show even less desire than in his own work. He will nevertheless do a reasonable job under two conditions: a timorous respect for the white and constant supervision.

571 Comparing the Indians among themselves, one cannot blame anyone as stingy. It is the most harmonious economic equilibrium that one can imagine, although it is at a very low level.

*[192] Very rare are the cases, that are known, of singularly indolent types, tesé-bũhũgõ, and parasites, whom their fellow tribesmen themselves find fault with.

462 The woman, yes, finds herself busier, more absorbed as it were, in the housework (as will be seen later, VIII -- 1, a (9)), busying herself with the younger children, cultivating her clearing, and preparing the food or making some artifacts.

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The school children show some inclination and skill for the manual arts: the girl prefers the work in the field and also appreciates embroidery and sewing.

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He is also endowed with his talents as a worker. The skill, which we have already pointed out and will point out (see ch. V /see Ch. VI/), the perfection, and the relative speed in the kind of jobs that he traditionally performs are the best proofs.

The necessity to live forces him, for his part, also to face great difficulties in order to conquer nature. It is enough to imagine the sacrifices imposed by the cutting for a clearing, with the means formerly at his disposal. His endurance, for example, for rowing, is worthy of consideration. For other jobs, such as agriculture or digging the ground, he is weak. Although the work rhythm is not intense, but rather is always with the calm that is characteristic of him, and he has better nourishment than in his home, after two weeks the Indian begins to weaken and not infrequently to lose weight; and after two or three months he must be excused for holidays and rest (13).

13. Besides the danger of malaria in the lower Rio Negro, this weakening of the Indian, especially when he lacks his customary foods, condemn the process (that some are already exploring and others, ignoring the circumstances, recommend) of making use of the native hand in the extraction of the piassava, the Brazil nut /Port. castanha, "chestnut," the name of several trees (and their fruit), including the Brazil nut/, or borracha. We think that such jobs can be, or rather must be, performed only by the caboclos, who already have physical endurance and a psychic disposition different from that of the natives.

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10) Patience.

He is a man of extreme patience. How useful it would be if this quality of his could be channeled into so many sectors of our civilization! It is documented by those jobs which require not only hours, but sometimes days, months, or years of work and attention, such as the preparation of the tucum and of a net, the making of a canoe with the stone ax and fire, or to pierce regularly a sarabatana /blowgun/ or a stone of amorphous quartz (see VII -- 3, d (2)) with the help of a stick and very fine sand. In a canoe he endures a rain for hours on end, or a scorching sun the whole day, without a word of complaint.

We never saw him fight (except when already drunk) or show impatience and protest against another Indian, although the occasions for it were superabundant. For example, to complain about a companion, because his indolence forces him to work harder. If he walks bent under a heavy load, and another Indian is blocking his way, he does not yell for him to move, but will patiently go around, taking a longer route.

11) Shyness.

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Before the civilized, whose superiority he recognizes and feels, he always shows docility. Never an open revolt; although he not infrequently fails to do what he told him to do. Rare are the episodes of joining together for a reprisal (14).

> 14. Some few episodes are recalled, but all of them were when the civilized violated some tribal custom or practiced true injustices or cruelty...

It is to be noted that, if the civilized asks him for a favor, he will perhaps answer with "I do not want to." If he is ordered in a categorical way, however, the Indian obeys and even cheerfully. Positive orders are more in accord with his spirit.

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the Cuduiari I met Indians who spoke of the advantages for personal autonomy of smaller residences. The Satellite community of the *Bahikiwa* subsib was in the process of establishing itself fully in small, square-shaped, individual household residences.

SANITATION

A well-run community, as we have already observed, is clean and orderly. The maloca is swept regularly and is neatly maintained. Except for an accumulation of kitchen debris at the rear of the house, the grounds, including the plaza, the canoe landing, and the path from the canoe landing to the house, are kept orderly and clean. The headman, responsible for the appearance of the community, commands the women to clean up house and grounds in anticipation of visitors. Normally, the women of his household, wife and daughters, sweep the central corridor as well as the kitchen zone at the rear and the front reception area. A headman's wife does not command assistance in general cleaning chores. She requests it and it is most unlikely that a woman asked to help would refuse. When the women take to cleaning they do so with gaiety and vigor, as is appropriate for a collective undertaking.

The Cubeo regard disorder as a sign of low morale, so that a house that has become untidy will surely be restored to order in expectation of company. A large maloca is almost invariably clean if only because it is a firm and effective headman who will have founded a large maloca in the first place. When a guest arrives unexpectedly, the woman who first presents him with the formal offering of boiled capsicum peppers apologizes for the condition of the house. Since there is always some advance notice of a guest's arrival, the women have some time for tidying. Cubeo etiquette is rather demanding that guest and host make the effort to appear at their best when they meet.

Sanitary standards of a Cubeo community are very high. The Indians protect the river from pollution. They dump in it only waste meat such as entrails – but these are immediately devoured by the piranha fish. No one defecates near the river. People go off into the brush, that lies at no great distance from the house. When a child has been toilet trained it, too, will go off to the brush for its excretory functions.

A dump is maintained near the river bank. During the rainy season the household waste products are washed into the river. But at that time the volume of water is high. During the dry season the dump is

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501 against the gunwale to set the rhythm. Frequent changes of stroke
516 are common. In pulling away, the first stroke is slow and strong. This is followed by a brief pause, the blade just out of the water, the stem resting against the gunwale. The helmsman, who steers with a broader-bladed paddle, uses powerful slow strokes that are one to two or three to those of the prowsman. When inertia has been overcome the stroke is accelerated, often to a furious tempo. The oarsman's back bends lower and his stroke is sharp, fast, and shallow. A fast beat is not kept up for long. The paddlers rest, permitting the canoe to continue on its own momentum. Unless exhausted from a long trip the mood of men in a canoe is gay. They burst into spontaneous shouts of *he ee ee*, sing, and joke loudly. Each passing bird is addressed, as "Where are you going?" With the paddle held as a gun they aim at the bird, pretend to shoot, and shout, "Now he is dead!" On one occasion we chased a covey of herons downstream for about two hours for amusement. The birds followed the river course, flying some 100 yards before settling on a branch. Striking paddles against the canoe and beating an empty gasoline tin, we drove the birds to the communities. The Indians shouted, "We sent you herons, why didn't you shoot them?"

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The most important canoe positions are those of stroke and of steersman. A woman traveling with men always steers, the lighter work. She may even nurse her child while steering. Among boys, each wants to be a steersman because it is easy. When the people are in no hurry canoe positions are informally assigned; children then occupy the stroke position, in a large canoe sitting side by side. They also steer. On a long journey the prowsman or stroke is always the strongest man, while a woman, or the oldest or weakest man, is at the helm. Intermediate positions are filled by considerations of balance, each canoe known for its own balance characteristics.

501 462 [857]

All the Indians know the river and its currents. Downstream the canoe is piloted along the currents that sweep out from creeks, calling for frequent crossovers; the center of the river is usually avoided because of the sun, the Indians preferring the shade of the shoreline. Going upstream the canoe hugs the shore and in rapid currents the men pull it along by seizing creepers. During low water, punting poles replace paddles, and sometimes the riders get out and push. High water offers cuts through the forest. I have timed these short cuts against the regular passage downstream and found that there is no actual saving. Threading through jungle lagoons in a large canoe is time-consuming, but is less monotonous and tiring than the direct passage. These passages lead often through dense brush that

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To produce farinha, which is mainly for trade, and chicha, which is mainly for sociability, she draws upon what is normally her "spare" time. She gives up the evening hours of rest, moments of gossip, play with her breast baby, and food foraging in the brush, which she regards as a pleasant diversion from the back-breaking manioc routine.

A Cubeo woman cannot be coerced to work any more than a man can be. Her willingness to work hard depends, in the case of a married woman, upon her regard for her husband in the first place, but also upon her general relations with the community at large. The Cubeo know that a lazy woman is a disaffected woman and they are conscious, accordingly, of the social importance of marital felicity. The only control the community has over a domestic situation is by maintaining a generally high level of good feeling. Needless to say, Cubeo women are not and do not consider themselves to be abused. A woman who does not care for her husband will leave him or, if her laziness is deep-seated and represents a grievance against the community as a whole, she will urge her husband to leave with her. The fact is, the feeling against indolence or apathy toward work is so strong that even a thick-skinned person can sense the unvoiced community disapproval. Thus, in the absence of strong political authority the productivity of a Cubeo community depends in the main upon all of the subtle factors of kinship, sexual attractiveness, and satisfaction, and of public morale. An unproductive community is normally not underprivileged by virtue of location or of tools but simply by its own lack of social health.

FISHING

Fish are abundant and there is hardly a day when fish are not part of the diet. The basic Cubeo meal consists of manioc cake and fish. Every male, from puberty to the grave, is a fisherman. Fishing is the regular masculine routine. Most fishing is individual – a man sometimes accompanied by a young son in a small canoe fishing with hook and line, or a man (also accompanied by a young son) fishing in shallows with bow and arrow. An Indian fishes his own stretch of river at a preferred place. If a man wishes to join another at the same place there is no quarrel, since fishing is never competitive. There is some rivalrous display of a catch but only a good-humored kind. Unlike gardening, which follows a rigid routine, fishing is flexible; a man follows his hunches and preferences, the seasons, and the species of fish and their habits. Some fishing is by torchlight, at night. The men do not necessarily leave for the river at the same time,

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He brings home the hide for a trophy, for which there is no further use, but the teeth form a girdle that is a mark of high status. Jaguar hunting is strictly voluntary and is not a formal test of manhood. During my stay among the *Bahúkiwa* the headman's son – an aspirant for the position – killed a jaguar with a steel-tipped lance and accepted modestly the moderate acclaim of the community. His explanation was that he wanted to experience what it was like to kill a jaguar.

GARDENING

I have no statistical means for comparing the relative contributions of men and women to the food supply. The general rule is that men provide the bulk of the protein, women the bulk of the carbohydrates.

The Cubeo unhesitatingly regard the man as economically most important. This is surprising, since manioc in its multiple uses as food, chicha, and trade goods is not only the staff of life but the source of intrasib activity, status, and general well-being. My informants pointed out, however, that it is fish which is the important food, and besides, they added, it is the men who make the manioc clearing. Nutritionally they are right. Bitter manioc is a poor food, rich in starch and deficient in protein.

An important distinction between the labor of men and women is in the nature of their economic effort. That of the woman borders on drudgery. Hers is the steady routine of planting, harvesting, washing, scraping, grinding, operating the tipiti press, and, finally, forming the manioc cake and baking it.

On days when only subsistence manioc – that is, the manioc cake – is to be baked, a woman devotes half of all the daylight hours to its preparation, including time in the garden. Her preferred routine is to spend six hours on alternate days in gardening. On the day she gardens, she also spends two or more additional hours in processing the roots. On the second day, however, she works only four hours on manioc. She spends, on the average, 12 hours on manioc over a two-day period. If to this is added hours spent in preparing chicha and farinha, the annual average comes close to nine hours a day. By contrast, men's labor is more flexible in its demand upon time and the quality of effort. However, it would be erroneous to overstress the distinction. There is, after all, variety in the manioc cycle as well.

Women customarily go to their manioc gardens at the same time, leaving the maloca an hour or so after daybreak and after breakfast. Each smears her face with red pigment both as ointment against sunburn and as preventive magic against the jaguar. A woman is

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usually accompanied by an unmarried daughter, who is both helper and chaperon, a dog, and her breast baby. Her equipment is a machete (in the past it was a digging stick), a portage basket, and a tray upon which she rests her baby.

With the machete she cuts the long root at the base of a mature manioc plant and then loosens the earth so as to pull out the cluster of tubers. Each root yields an average of six tubers, two of which are large, two medium, and two small. This phase of the work is difficult but the woman moves quickly and silently. She does not sing at her work. Her daughter, assistant and apprentice, tears each tuber from the root, scrapes it clear of earth, and drops it in the basket. When a basket has been filled the woman gathers up the stems of the manioc plant, trims them of their leaves, and stacks the cuttings neatly in small heaps. She burns the leaves to add ash to the soil. She does not replant the cuttings immediately, but allows them to lie for several days. After an accumulation a woman devotes a morning to replanting. She breaks up the soil of the segment she has harvested and forms it into small mounds, into each of which she puts a number of trimmed cuttings, setting them in at a sharp angle. She works segments of garden that are about 25 yards square. After replanting, the earliest harvest will be after half a year, but full maturity takes two years. Each 25-square-yard segment yields from 50 to 60 pounds of manioc, or one basket load.

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Among the *Bahúkiwa*, for whom I have productivity figures, the household of the headman harvested 400 baskets of manioc annually. Another household that had three adult women harvested 500. One old woman had a minimum yield of 150 and all other households averaged close to 200. Ten households produced 2,550 baskets, or some 75 tons of manioc a year. A basket of manioc converts into two large manioc cakes. In the headman's household of seven people three cakes were eaten every two days, leaving a "surplus" of close to 30 per cent for use as chicha and as farinha. On the other hand, households producing 200 baskets annually are close to the subsistence line.

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The point of this digression into production figures has been to show how exigent are the demands upon the woman's labor. The women feel that they cannot afford to interrupt their labors or they will fall behind. Nevertheless, childbirth, illness, ceremonies – women do not garden on the day of a ceremony – and the press of other activities such as accompanying men on prolonged trips for hunting (in the nature of a respite for a woman) take their toll of labor time. Women do not complain of having too much to do. On the contrary, I have heard the grievance that the manioc garden is too small.

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place the blame upon the material conditions. The woman, then, is more than a mere toiler in the garden. She qualifies as agronomist as well.

Women return from their gardens in the very early afternoon. They pause at the rear door of the house only long enough to drop the machete, and without putting down their burdens of manioc and infant, go directly to the river to bathe themselves and to wash the tubers. This is a pleasurable hour. Refreshed from the heat of the morning, the women play with their infants and jest with one another. Washing the tubers is a simple task of dipping the entire basket into the water. A light midday meal follows the washing, and the routine of processing the tubers begins. The woman may start with fresh roots, but for a more tender manioc cake she will allow the roots to soften for several days either in the house or in the river.

The first step is peeling. The woman seats herself at her own household compartment, her back braced against a post, her legs stretched out stiff and straight before her into the dance corridor – the public alley of the house. The manioc basket is at one side and a tray at the other. She bites the butt end of the tuber to break the skin, and using teeth and fingers pulls off the readily peelable skin. This phase of the work is leisurely. Women who are not at the moment occupied come by to chat and help casually in the peeling. A woman's daughters sit with her and help. Enough is peeled for one manioc cake – that is, one half of a basket.

The next step is the most arduous and least liked – grating the peeled tubers on a wooden board (*pediba*) that has been set with abrasive stones. A woman can usually shift this work on to her daughter or her daughter-in-law.

The scraping process is as follows. The woman sits with her feet stretched out straight before her and slightly spread. She sets the grate on her legs with its far end braced against a house post, the forward end pressed against her abdomen. She takes up two large manioc tubers from a tray, one in each hand, and scrapes vigorously with alternate arm movements with the hardest pressure on the forward stroke. The action is vigorous, involving not only full arm movements but the bending of the back from the hips. Young women of marriageable age work rapidly and continuously until bathed in sweat. When worn down to a size where it cannot be conveniently scraped any more, the tuber is thrown aside and two others taken up. Finally, a collection of scraps is assembled into a single bunch clutched in both hands and scraped down virtually to the very bottom. This is a break in the work rhythm since both hands are used together and the move-

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462 ment is slower and altogether less vigorous. Usually, except when she
• 461 is very strong and young, the woman interrupts her scraping for a
252 rest or change of occupation. For example, the work may be staggered. If the mother begins the scraping and the daughter continues with the peeling, the daughter, when she has finished peeling, will take over the scraping, while the mother prepares to begin the next process. The manioc mash that has accumulated at the far end of the board is removed by hand and thrown into a basket tray, and the liquid drained off into a pot to be poured out.

[415] A substantial part of the poisonous liquid of the manioc has been removed in the scraping on the grater; the mash is further dried by pounding it through a tightly woven basket sieve. A tripodal frame is set up and the sieve set on it at a woman's waist level. The pounding, also strenuous work, requires vigorous motion of the arms, back, and shoulders. With both fists clenched the woman attacks the mash,
[516] using her arms as pistons in a crisscross motion. The mash is frequently turned. As this work is done standing up, the woman has a chance to limber her legs. Because of the height at which the sieve is set little girls are not very efficient at the pounding, and only help out for a little while. When the mash is relatively dry after a thorough pounding it is put into a long tubular squeezer (the tipiti). The woman grips the lower end of the flexible tube between her knees, and bending the top toward her, fills it with the mash from the sieve. When full, the squeezer is hung from a projecting beam at one of the house posts. Through a loop at the lower end of the squeezer a long pole of heavy wood is inserted, the fulcrum end going through a few twists of heavy rope around the post. This phase of the work affords the woman a rest from the strenuous labor of scraping and pounding. She may sit on the pole, adjusting the pressure by the distance from the fulcrum. A woman is sometimes joined by another, who helps her sit on the pole. The liquid starch that runs down the sides of the squeezer is collected in a pot set for it. The pot is covered with a layer of ash that absorbs the volatile prussic acid, and the clear starch is used as the base for a porridge.

The mash, free of much of its prussic acid content, is finally formed into a cake upon the flat circular oven at the rear of the house. The baking is leisurely and as women wait their turn at the communal oven they enjoy some sociable moments.

462 A good housewife prepares a fresh manioc cake daily since the
252 cake tastes best when fresh, moist, and warm. On the second day a
[512] cake is dry and considerably less palatable. Thus, under ordinary conditions, the routine of manioc preparation is daily. However, a wom-

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an who has daughters to help her can prepare a surplus of mash that, covered with banana leaves or stored in a circular bark bin, holds over to the next day. Whatever time a woman spares from manioc cake preparation is immediately absorbed by other duties, among them the making of chicha and farinha, which is simply the manioc routine all over again. When a woman prepares manioc for chicha, however, she has the help of her husband, but only at those stages that are totally distinct from manioc cake preparation. The Cubeo tradition is for men to take no part in *duno* production, once they have made the clearing. Still, men do help their wives in peeling the manioc tuber. Since the knife has begun to supplant the teeth as a peeling implement, men, who are the most expert in handling knives, feel somewhat more free than formerly to help – but not without embarrassment. I once walked into the house and saw the headman sitting amiably beside his wife and peeling manioc with a knife. Were I a proper Cubeo I would have managed to appear as though I had seen nothing. But the sight was so unexpected I stared. The man flushed and dropped the knife and tuber. Then he collected himself and explained that his wife was not well and so he felt he should help her. He assured me, as his wife smiled, that he never did this ordinarily.

Whereas all women share the same general manioc routine, individual circumstances differ. A young married woman with young children has no one to help her and must work very hard in contrast to an older woman with several daughters who can relieve her of much of the work. A woman with many sons and no daughters has a very heavy burden. The men provide her with a very large garden, they eat heavily, they are sociable and plan drinking parties. An old woman living alone prepares her own small manioc cake ration, and worries rather that she can call on no man to enlarge her manioc garden. Yet in all these individual circumstances one observes leveling factors as well. The household with very young children eats less, has less need to entertain, and has smaller trade needs. The household with grown daughters eats more, entertains more – suitors and their parties for example – and has great needs for trade goods, skirts, and ornaments for the girls. The household with many men has greater access to trade goods through their wage labor and saves on farinha. An old woman living alone may eat with her close kin and so devote her manioc production entirely to farinha, if she desires. There are no significant differences in manioc cake consumption. Families differ only in the rather small prestige of owning trade goods and in

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A few communities rear ducks in the same manner,

and some Indians have experimented valiantly with rearing pigs as pets.

The trade element in Cubeo experimentation with plants and animals is important but not, to repeat, the exclusive interest. I had been living among the *Bahúkiwa* a short time when they learned of my liking for fruit. I was constantly presented with fruit, some wild and some cultivated. I usually made some payment in the form of a small gift. Word spread along the Cuduiari. One morning I saw a fleet of a dozen canoes or so, each heaped high with bananas, plantains, pineapple, lemons, and oranges, coming to the community. It was all for me, brought in the expectation that I would reciprocate with a gift. This transaction, however, was an unusual one, for normally the Indians have no market for any food product but dry manioc – farinha. They have no great taste for fruit and grow more than they normally consume for the sheer satisfaction of growing it. Lemons, for example, are used by women to prepare a hair wash.

MANUFACTURES

Cubeo material culture is rather elaborate for a tropical forest tribe, but not as fully developed as is that of the more westerly tribes that have a cotton technology. Material culture has been treated by Koch-Grünberg and is, moreover, fully covered in the *Handbook of South American Indians*. I shall confine myself then to a discussion of manufactures as it bears upon an understanding of Cubeo social life.

There are few products made jointly by men and women. Men ordinarily make all objects that are of wood or fiber, while women specialize in ceramics. Thus, the great bulk of material equipment has been made by men. This includes the house, all baskets and trays, hammocks, canoes, signal drums, ceremonial objects, musical instruments, weapons, and fishing gear. Women make pottery, including the large ceramic plate of the manioc oven and the hourglass-shaped pottery hearthstones. They also prepare gourds as dishes and water containers since these supplement pottery dishes. There is a small basket (*póbü*) in which personal articles are kept, and this is made by young girls as well as by men. The only product that is jointly made is the *pedíba*, the manioc grating board. Men make the board, execute a design on it, and women insert the bits of stone that form the grating surface. Whatever is made is either as a specific gift or to replace an object or utensil that is no longer serviceable. Men work slowly and for short intervals, so that the completion of a

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462 simple basket is often a matter of several weeks. Every man has at
461 his side, so to speak, a number of unfinished objects which he hopes to get at before too long.

462 The sexual division of labor in manufactures is rather firmly main-
323 tained. I learned of few objects in use that were not made by a member of the proper sex. Young men are drawn to pottery making, but they may handle clay in a playful manner only. They make pots and dishes in strange shapes, working rather expertly. Such dishes are given to children as toys and are soon destroyed. Children, boys and girls, play with clay, making small animal or human figures and quickly destroying them. No permanent clay figures are ever made. Serious pottery work is an annual affair, undertaken by the women when the falling river has exposed the clay banks. All at once the women working together renew the household ceramic ware.

342 Manufacture is most often a group activity, and like all group ac-
[461] tivities is regarded by the Indians as a pleasurable recreation. The
[476] exception to this rule is perhaps housebuilding, which is often strenuous. Even then, when the exertion of the task has broken the spell of good feeling, the men stop and turn to another task. A large maloca can be a very long time in building. Among the *Bahúkiwa* a house begun when I arrived was not yet complete when I left almost a year later. A house must be built by a group working together not only for technical reasons, but in obedience to the principle that all who are going to live in it must work on it.

Building the communal house is a major technical and social enterprise. It tests the capabilities of the headman and the morale of the community. The true maloca is a solid structure built with great care, skill, and concern for details. Temporary houses may be slipshod in construction, but when a house is slipshod it is either clearly designated as temporary or it will be a cause of shame. Every
342 part of the house is built with the greatest care, but nothing reveals
284 more clearly the Cubeo concern for combining structural integrity and aesthetic design than the lashings that hold all the materials together. The most conspicuous lashings are those that bind the main beams. The builders start with temporary house posts and with temporary lashings. Finally, when the entire structure is in place, an expert lasher goes over the entire inner structure, replacing the beams and rebinding them in a consistent pattern, using carefully chosen
342 lianas. The Cubeo are painstaking in all crafts, but the maloca is
[114] their supreme creation. I was able to observe almost every stage in
[461] the construction of a maloca among the *Bahúkiwa*. I do not recall that a single bundle of roofing thatch was laid under pressure or

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under duress. Men worked on the house only when they felt cheerful and dedicated to the work. The man who felt out of sorts dropped away and returned only when his spirits had improved. Dependency upon mood was one of the most important factors delaying completion of a house.

Even so, the magnitude of the technical problems is not to be underestimated. The mere assemblage of material is a complex, arduous, and time-consuming task. Construction materials are not always close to hand. The *Bahúkiwa* fetched roofing thatch from the mouth of the Cuduiarí in what was technically the territory of the *Hehénewa* sibs. Their house of 12 compartments consumed 360 bundles of thatch, and, since each canoe could transport only five bundles, over a hundred canoe loads were needed, a task that would normally be spread out over many months. The *Bahúkiwa* headman was able to borrow from the *Comisaría* a large cargo barge and in this way a great deal of time was saved. Even so, a large party of several households camped for weeks on the lower river during a dry season, gathering and preparing the parana palm thatch (*trinâ*). Altogether, thatch gathering consumed 50 days of the time of at least half the community. The practice is for the headman to institute a "crash program" to get each phase of the work well under way. His problem is to fit each phase of construction into the routine of daily and of seasonal life with minimum disruption. Strictly speaking, the decisions are not his. His is the technical voice, but he will do nothing without discussion with the household heads. Roofing can be cut during the two dry seasons and can never be finished in only one. Gathering, trimming, and binding the parana palm leaves into sheaves is the only housebuilding task in which women share.

The headman, together with his firmest supporters, that is, his own sons and blood brothers, has the specific responsibility for erecting the central framework, the three pairs of heavy posts that will support the main weight of the roof. Others may help in this if they wish but they have no specific obligation to do so. The inner framework of three pairs of heavy posts forms the inner box around which the rest of the house is built. The timbers must be carefully chosen and then well dug in, while the parallelogram must be very carefully laid out. The floor plan is laid out with long sticks, and right angles are very accurately estimated. The rest of the framework including the ridgepole is a collective enterprise and is the second stage of construction. Roofing is the third stage. When enough roof has been laid down to provide even a bare shelter, the close kin of the headman move in.

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home from the garden represents her carrying capacity. These are the technical problems. They are not inherently formidable, except in terms of the traditional sexual division of labor of the Cubeo. The men who make the original clearing can call upon group labor and they have the spare time. If increase in manioc cultivation were only a matter of preparing a clearing it would be relatively easy for any community to double its present zone of planting. The Cubeo, however, must calculate the size of a clearing in accordance with how much land the women of a household, working independently, can cultivate. On her part, the woman does not cultivate more than she can handle in the course of her accustomed routine. In manioc cultivation each household is autonomous; and while a woman can call upon the help of another woman when she is not well there is simply no collective or cooperative organization to help harvest, bring in, and process the crop. The headman who has the authority to direct the masculine work party that prepares the clearing has no jurisdiction over the work of the women. And neither does anyone else.

Nor does the nature of demand place much pressure upon manioc production. Under ideal conditions at least two-thirds of the manioc crop is for food. The rest is divided between chicha and farinha. Since the Cubeo are moderate eaters and do not have the custom of feasting outsiders, the demand for manioc as food is inelastic. There is only a little more elasticity in the demand for chicha. Although the drinking party is a principal means for binding the sibs it cannot be said that increasing the quantity of chicha consumed at a party or adding to the traditional number of parties would promote additional sib cohesiveness. In this instance a law of diminishing returns may be said to operate.[2] In any case, since each sib assumes some of the responsibility for entertaining the others, the burden of supplying the chicha is phratry-wide. The poorer sibs entertain less often than do the richer ones.

It is in the production of farinha that some elasticity in demand may be expected. Farinha, as the Cubeo equivalent of a "cash crop," pays largely for vanity articles, ornaments that have no traditional sanction, but also for cloth petticoats, that have now become customary apparel. However, this aspect of production for the market is also socialized. The goods a woman acquires from the sale of her farinha are largely committed to the intricate network of gift exchanges that apply between husband and wife, brother and sister, and between ceremonial friends of opposite sex. In a general way

[2] See the chapter on the drinking party.

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the production of farinha by women is a partial counterpart to the work of the men in the rubber forest. The man takes most of his earnings in "capital goods," muzzle-loading guns, machetes, fishhooks, matches, knives, thread, needles, ammunition. The remainder goes to a few vanity items for himself and in gifts for his wife, sister, and female ceremonial friend. It is these gifts that a woman is obligated to reciprocate through her farinha trade. Since these gift exchanges involve traditional relations of status equality they quickly achieve a relatively stable equilibrium. Only a small part, then, of commercial exchange leaves the traditional channels of lateral circulation of goods. As for "vanity" purchases, they form no part of any institutionalized expression of social prestige. The issue for the Cubeo is rather one of a limited degree of self-indulgence. For a woman, in particular, the privilege of indulging a fancy for some trinket and freely contracting her farinha for it is an essential part of her sense of domestic well-being. It is an expression, on the one hand, of her autonomy, and, on the other, of domestic felicity. A dissatisfied wife does not indulge her personal vanity more; on the contrary, she produces less.

Another important element in production is the attitude toward labor. For the Cubeo all effort must be inherently satisfying. Women accept more drudgery than do men, but they no more than the men would accept the bitter peasant philosophy that hard and unrewarding work is man's lot. Men and women alike are accustomed to a variety of effort. They do not care to drive themselves beyond the onset of boredom or of fatigue. All work patterns are based upon short and diversified rhythms. I have demonstrated this in the work cycle of women. It is even more marked in the work cycle of men. Food gathering and preparing does demand continuity and completion. The hunter must complete his chase, the fisherman must return home with a suitable catch, and the housewife must complete her daily ration of manioc cake. Even so, there are many opportunities for rest and diversion that the Indians take. They would rather eat less than work more. In the course of a year there are many holidays. Among the *Bahúkiwa* these averaged almost one a week. On the occasion of a drinking party women do not go into the fields either on the day of preparation or on the day after. In manufactures, which form part of the domestic economy, the pace of work is very slow. Men, who make the baskets that are important home utensils as well as major items in trade, work very sporadically. There is no compulsion to finish something quickly. Thus, on the whole, the Cubeo work habits also contribute to general economic inelasticity.

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these conditions is relevant to an understanding of Cubeo culture. But even taken together they do not account for the principal patterns of Cubeo culture, which have a natural history of their own. The question, however, is not whether cultural patterns have a natural history, but only whether the ecological and the technological theories are adequate accounts of the natural history of a culture.

ADAPTATION

Thus, the problem of cultural adaptation to an environment cannot be dealt with simply and one-sidedly by describing the hypothetical shaping of a culture to the environment. Adaptation is a study of interaction. Generally speaking, highly specialized environments demand highly specialized and hence relatively predictable cultural responses. The tropical forest is not an example of a highly specialized economic environment judged empirically by the diversity of cultural patterns it has sustained. Bitter manioc is clearly a cumbersome crop, its high yield and relative ease of cultivation being offset by its very heavy demands on labor, specifically on that of women. It can be argued, therefore, that this crop offers a poor economic base for social and political development. Yet the Northwest Amazon also is familiar with maize, yams, and sweet manioc, not to mention beans and squash and gourd. These crops have traditionally sustained high cultures. Can we explain in ecological terms why the Northwest Amazon tribes chose to specialize in bitter manioc rather than maize and beans, as did, for example, the lowland Maya? It would seem that here is a case of cultural choice in which preferences for quick yield, minimum care in cultivation, strong sexual division of labor, and perennial harvest rather than the problems of storage and seasonal periodicity may have been compelling factors. Since the Cubeo social system placed no great demands upon an expanding economic productivity the "easy" adaptation to nature was always feasible. The main patterns of Cubeo life do not stress the disciplines of prolonged and closely managed effort. The habitual rhythms of masculine labor are discontinuous and varied. Leadership is based on the principle of mood regulation rather than on dedication to an ideal or submission to authority. High cultures are based on strongly disciplined and collective ways of life. By contrast, the Cubeo values greater emotional spontaneity and personal autonomy. An economy, needless to say, will in the end transform cultural values as well as the personal character of the members of a culture. Before